

## ABSTRACT

An apparatus and method for maintaining substantially uniform temperature of semiconductor wafers and similar workpieces is provided. The method and apparatus utilize a workpiece holder that is substantially a closed chamber, which includes a wall structure including a workpiece engaging wall in thermal communication with the chamber. The workpiece holder also includes a condenser that communicates with the chamber and a heater that applies heat to the chamber. The heater applies heat to a fluid inside the chamber such that when the fluid vaporizes within the chamber the condenser abstracts the heat from the fluid. This causes continual circulation of vapor through the interior of the chamber, which helps to maintain temperature uniformity. A feedback control system connected to one or more temperature sensors can control the heater, the condenser or both so as to maintain a predetermined set point temperature within the chamber.

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